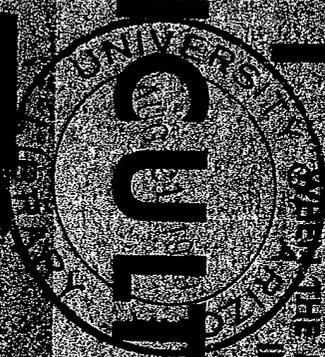


TOPIC

HOP! AGRICULTURE WAS OLD
BEFORE THE EUROPEANS CAME
IN 1642



AGRICULTURE



AGRICULTURE INFORMATION SERVICE
OFFICE OF NORTHERN ARIZONA

MUSEUM OF

NORTHERN ARIZONA

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HOPÍ INDIAN AGRICULTURE AND FOOD

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Foreword

For over twenty-three years the Museum of Northern Arizona has been publishing, first in Museum Notes and later in the Plateau, short authoritative articles on various aspects of Northern Arizona history, science, and art. As many of these publications are now out of print and not available to an increasing demand, the Museum has collected them and is reprinting them in a series of small volumes in which the subject matter is classified, so that readers with special interests can have their appetites for knowledge satisfied.

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HOPÍ INDIAN AGRICULTURE: I, BACKGROUND

—ALFRED F. WHITING.

To understand Indian agriculture in Arizona we must go back to the days when Rome was young and England was the "Wild West." In those days the seeds of civilization had just reached Arizona. A marvelous new way of living had been discovered to the south and was slowly being adopted. It all centered around a strange new plant. This plant was so delicate that it had to be taken care of! But it produced in a few short months enough food to keep the family alive all the rest of the year. This plant, which we call corn or maize, was a marvelous thing. It bore great ears, often five inches long, and as much as an inch in diameter! Truly, to those primitive hunters it was a wondrous thing.

As the centuries rolled slowly past this corn increased in size and grew in importance. It became the center of all activity and thought. Religion and philosophy centered around this "giver of life." If this corn gave food, it also brought leisure to a nomadic people. This meant time for activities other than food gathering, an opportunity to sit and whistle, and perchance to think. And so, unconsciously a new civilization was born.

Before long, other plants were introduced or domesticated. Squash was a very useful plant, for it provided not only food, but also

a wide variety of utensils for the household as well as a musical instrument for the dance.

Beans seem to have been introduced somewhat later. Several varieties of beans were domesticated from the wild teparies of southern Arizona. The sunflower also thrived under cultivation and eventually came to be used as a source of oil as well as a valuable deep purple dye.

And so it went with new ideas, new methods of cultivation and new varieties being introduced or developed until by the middle of the thirteenth century the Southwest was dotted with numerous agricultural communities, some of them of considerable size and power. They were raising several varieties of corn, numerous beans, the squash and the sunflower. Cotton was raised in quantity. Agriculture was carefully conducted according to certain definite rules and formulas. There were complex laws governing the ownership of land. In central Arizona the people had discovered how to lead water from the rivers to their distant fields by digging great canals. This made it possible to cultivate the land as extensively as the white man, with all his science and engineering, is doing today.

Then, in the year 1276 disaster struck. A twenty-three year drought settled down over the

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Southwest and agriculture came almost to a standstill. Many people were forced to migrate, looking for water—water for their crops—that they might again live the full life that agriculture made possible.

It was not an easy task that these people faced. Their numbers were scattered and their morale was largely shattered. Their social and religious organization had been disrupted. All these could be reassembled after a fashion but what was far more serious, their seed, so carefully saved at first, must have been nearly or quite exhausted. One can suppose that where there had once been many varieties only a few remained. They now turned to other people, more fortunate than themselves and begging, buying and perhaps stealing seed, began to build up again their stock of cultivated varieties.

A little before the time that Chaucer made his famous pilgrimage to Canterbury some of these people began to join the little settlements in the vicinity of the present Hopi towns. The sand-dipping gently to the south, acts as a giant reservoir, and although it may not rain for an entire year, the springs along the southern edge of the Hopi mesas still flow. What is more important still, there is enough underground seepage along the bottoms of the washes and under the edges of the cliffs so that corn and cotton can be raised. Thus it was that many refugees congregated in these more fortunate Hopi villages and began to reassemble around the existing Hopi culture some of the fragments of what had once been, for them, a great civilization.

These new people must have brought with them some seed from their own country. In later years the mesa people visited their neighbors in New Mexico and in the Salt River Valley and brought back other seed. Not all of these varieties were good! Those which were not satisfactory were promptly discarded. Experimentation and selection went on year after year,

until in the sixteenth century the Spanish came.

These strange people brought with them a new religion, built large mission buildings and attempted to revolutionize the entire life of the community. Eventually they were driven out and their missions destroyed. Only a few remnants were left; a carved beam in the antelope kiva; a few ruined walls; a cross, strangely out of place on a heathen dance mask. From the point of view of the church, the priests had accomplished nothing! Perhaps not, but they did bring about a profound change in the agriculture of the Hopi villages. While the mission buildings and down the mission buildings and purifying themselves from their religious contamination, they were eagerly planting the new seeds which the padres had brought to them, spinning the Spanish wool burros.

Peach orchards appeared everywhere and peaches became an important article of diet. Wheat, which became so important among other pueblo peoples, has never been successful in the Hopi country. Nevertheless, wheat straw embedded in the adobe walls of the old mission at Awatobi indicates that this grain was introduced at an early date, only to be abandoned.

Second in importance to peaches were the numerous vegetables which the Spaniards introduced. Chili, although it had been grown for a long time in Mexico, first appeared in the Southwest with the coming of the Spanish. Water-melons seem to have followed the Spanish also, for the Hopi name for watermelon is a combination of the Spanish word, "caballo" (horse), and the Hopi name for squash, "kiwi-batanga."

Onions had probably been used before, but the Spanish varieties were an advance over the little wild onions of former days. Of somewhat lesser importance were the two food dyes introduced at this time, safflower and cockscomb. The famous wafer or piki bread

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of the Hopi, instead of being plain white or grey blue, could now be baked a bright red or yellow or even striped red and white. So it was that while the priests made little impression on the soul of the Hopi, they unwittingly re-organized their diet. No other influence has brought so many new plants into the Hopi culture.

A drought in 1864 scattered temporarily many of this tribe, but they returned bringing new varieties of corn with them. At the first San Diego Exposition in 1915, representatives of several Indian tribes were gathered together. Here the Hopi met other agricultural peoples and varieties of corn were exchanged. So it goes—traders, the Indian Agency, schools, friends—are all potential sources of seed. The Hopi farmers have discovered the mail order seed houses and the nurseries of Denver and Phoenix.

Today a good farmer may raise as many as five distinct types of corn and as many of beans, each with its own name and special uses. He will have squash, pumpkins, watermelons, muskmelons, the inevitable chili and onions, cabbages and possibly tomatoes. Most certainly he will have peach trees and at least some apple and apricot trees. Some farmers are raising cherries, pears, and grapes. Not infrequently the dye plants and sunflowers find a corner in the gardens.

If a Hopi farmer is well off and can afford the time and space, he may be experimenting with potatoes or peanuts. He may even try to domesticate some wild plants particularly prized for their flavoring properties. When it comes to seed, the Hopi will try anything once. The results are often failures and are sometimes ludicrous. One recalls particularly the old man who planted cauliflower seeds and described the results as being "like a cabbage, only all white on the inside. And we don't know how to eat it."

The Hopi farmer of today comes

from a long line of agricultural stock. A few of his crops are ancient, but a very few. While wool has displaced cotton, most of the ancient food plants have been discarded in favor of other varieties which are easier to grow, yield better and have better flavoring or are more easily prepared. Still they are not entirely white man's varieties. Many of them are the products of his own or his neighbor's efforts. Certainly many of them are remarkably adapted to his particular environment, more so than are those of the white man.

Thus the Hopi farmer is today what he has always been—a thorough-going dry farmer, experimenting with new varieties and new ideas, but still performing his ancient mystic rites that there may be rain, that the crops may grow, that there may be prosperity for his people.